



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

cleus. According to structure, these fall into four main groups: (a) arkyochrome cells, in which the stained portions take the form of a network; (b) stichochrome cells, stained matter in rather straight stripes or rows; (c) arkyostyochrome cells, in which both network and stripes are present; (d) gryochrome cells, in which the stained material takes the form throughout of small granules. Figures of all but the latter form of cell may be found under the first reference cited.

*On Some of the Newer Aspects of the Pathology of Insanity.* W. LLOYD ANDRIEZEN. *Brain*, 1894, Part LXVIII, pp. 549-692.

The idea underlying this paper seems to be the practical laboratory demonstration of the often repeated thesis that for every psychic fact there is a concomitant physical equivalent. In making his demonstrations, the author follows out the physical details much farther than any other writer with whom I am familiar. The aim of the writer being to present a picture in detail of the deviations from normal to be discerned in the brains of the insane, the background upon which he draws must be naturally the normal organization of the nervous system. This presentation of the normal side occupies about two-thirds of the paper. To illustrate the character of the changes found in the insane brain, the author chooses alcoholic insanity as a type with clear causation, ascertainable beginning and duration, and a type of which abundant clinical material may be obtained. The whole discussion is minutely divided under some seventy headings, and possibly a better idea of its general scope could not be given than by naming over a few of the most important topics in the order in which they are treated. First comes a discussion of older views. Then follows a section on comparative neurology, the cortex and cortical lamination, its different classes and systems of cells, its regional differences, its type in the amphibian, reptilian and mammalian brain, functions of the different cells and layers as revealed by their forms and relations of their component cells, and as indicated by stimulation experiments, and by the phenomena of the epilepsies,—Jacksonian and psychical. From these heads we gather evidence which is taken by Andriezen to indicate that the "ambiguous" cells of the second layer and the long pyramids of the third layer are the cells first to receive incoming impressions, hence the primary sensory cells of the cortex, and that the lower layer of polymorphic cells, last to develop and most fully developed in the human brain, are associational in function. Following with "quantitive" and "qualitive" evolution of cortical elements, their "physiological elaboration," "education," "language," and "mental evolution," the author outlines very clearly the "law of psychogenesis." This is the usual conception that as more and more nerve cells (Andriezen uses the term "neuron" in the sense of Schäfer's preferable English equivalent, nerve cell) are developed in the sensory motor arc, psychic activities rise to higher and higher complexity. Even in a frog's spinal cord, this approaches a point where it has proved difficult to say whether the action is purposeful or purely mechanical. The cortex, according to Andriezen, is an enormously complex growth of "neurons" in connection with the olfactory, optic, and fillet radiations. His scheme is, therefore, the one usually adopted in neurology, with the function confidently asserted for a good many structures about which most other authors remain in doubt. For example, Andriezen treats as an established fact the theory that the dendrons are the receiving poles of the cells, and this becomes a point fundamental to his pathological findings, as we shall see

farther on. He also seems to adopt without criticism the idea often expressed by English writers that the fibre-plexuses in the cortex are the chief seat of mental processes, while the nerve cells are merely nutritional foci which keep the fibres in functional condition. From all that we know of the comparative resistance and fatigability of the nerve fibre and the nerve cell, there seems to be little enough ground for any such conception. All our facts point to the neuron as the conductive part of the nerve cell. Whether the dendron has any function of this sort is still a matter of heated controversy among high authorities. It is certainly a legitimate hypothesis to suppose that incoming impulses may be beating upon, say the auditory centres, with equal force during sleep and waking, and that the response which these arouse depends not at all upon the nerve fibre-plexuses, but upon the condition of irritability of the protoplasm in the nerve cells themselves. So, further, the author boldly asserts that no continuity exists between nerve cells, while Golgi and Dogiel both demonstrate such continuity. The importance of these points will become evident as we pass on to Andriezen's scheme of cortical pathogenesis. And they can be determined, not by dogmatic statement, but by decisive preparations, and these which Andriezen brings forward do not fairly clinch with those upon which Golgi founds his view.

Turning to the pathological side, as illustrated by alcoholic insanity, we find, under the "generalized and extensive type of onset," seven distinct elements composing the symptom-complex. Abbreviated from the author's statement, these are as follows: 1. Diminished power of recollection. 2. Diminished power of attention and volition. 3. Diminished initiative. 4. Diminished muscular power, tremor. 5. Blunting of moral sense. 6. Insomnia, nutritive break-down of cortex. 7. Disturbed balance of cortical representations, both as to the external world and the ego, delusions and hallucinations, suspicious, gloomy feelings, etc. Without going farther into detail, it is sufficient to add that for each of these symptoms Andriezen finds an appropriate pathological indication. For difficulty of memory, slowness of reaction, etc., he finds "moniliform swellings" with coalescence of "contact granules" in the dendrons of the first cortical layer. This is accompanied by discontinuity in the staining of neurons. Failure in more distinctively psychic spheres is accounted for by similar changes in deeper layers of the cortex, and these involve the cell bodies of the polymorphic cells, as shown by "various stages of disintegration," and so on *seriatim*. Interesting and suggestive as all these points are, the one thing lacking is a rigid comparison with normal specimens. Andriezen tells us that his conclusions are drawn from a systematic examination of "over a hundred" human brains. This gives ground for some degree of confidence in his results. But we are nowhere told, even, how many of these brains are normal and how many alcoholic, and in how many of the alcoholic his findings occur.

Andriezen's treatment of the authors to which he refers is somewhat loose, to say the least. As a single example of this, I may cite my own case. On page 680 he says: "Hodge's work in this respect, following on the older observations of Sadovski and others, shows"—and so on. Sadovski's paper appeared in St. Petersburg under date, April 17, 1889. My own complete paper bears the date, March 15, 1889, and my preliminary paper on the same research appeared in May of 1888. Further, Sadovski's work, in expressed purpose and method, are so thoroughly pathological as to have only a remote bearing on my own. Then who are the "others"? Personally, I care little for priority, but I would be grateful for refer-

ences to papers touching upon physiological changes in nerve cells prior to 1888. Andriezen certainly cannot have in mind either Anfimow or Pauline Ternowski if he has read more than the titles of their papers.

In this connection I feel in duty bound to add a word of criticism with regard to Andriezen's figures. Thirty-six of these are distributed in the text, covering the ground from the nervous system of hydra to the human cortex. Many look strikingly similar to familiar figures in Golgi, Cajal, Lenhossek, Retzius, *et al.* No credit is given, however, and we are led to suppose that they are all drawn from the author's preparations, or from his imagination. Which of these sources has been utilized is the harder to decide, on account of the difficulty or impossibility of ascertaining exactly how the figures were obtained. In no case is even the magnification exactly stated. No reference is made to the use of the camera, and in no case is an adequate history of the particular specimen given. These are matters of great importance, since the chief scientific value of a paper of this kind consists in accuracy and definiteness sufficient to make either its confirmation or disapproval possible.

The first impression on reading the paper is that a contribution of vast importance has been made. Its failure to bear a rigid cross-examination is, therefore, a keen disappointment. Thirty "General Conclusions," covering over five pages, bring the paper to a close, and, though it is full of suggestion, no squid ever more effectually covered his retreat with a cloud of ink.

### III. ANTHROPOLOGICAL PSYCHOLOGY.

BY ALEX. F. CHAMBERLAIN, PH. D.

*The Iroquoian Concept of the Soul.* J. N. B. HEWITT. Journ. of Amer. Folk-Lore, Vol. VIII (1895), pp. 107-116.

As the author of this essay is himself an Iroquois, it is a distinct contribution to the literature of pneumatology, such as an educated Indian alone can offer. Mr. Hewitt tells us: "Iroquoian psychic philosophy represented the soul as exceedingly subtle and refined, yet material withal, since it could be enclosed in a gourd bottle; as dark and sombre, like a shadow in color; as possessing the form of the body, with a head, teeth, body, arms, legs, feet, etc.; as partially blind by day, but sharp-sighted by night; as immortal by some, but as subject to death and even annihilation by others; as specifically carnivorous, but also eating the things which constitute the ordinary food of the living; as having the ability of uttering sounds, speech, sometimes resembling the whistling or the trilled note of the cricket, and sometimes resembling that plaintive and doleful exclamation so largely used and imitated in the chants of death and of public and private condolence and mourning." As to the state and condition of the soul after death, "there were several well-defined though inconsistent beliefs." The following soul-words are cited and interpreted at length by Mr. Hewitt: 1. *éři* (soul, heart, mind, as seat of sentiment), whence comes *wa-kat-er-yoñ'-ta-re'*, "I know it," literally, "My heart or soul is present with it;" (2) *Ka'-ni-kon'-ră'* (soul, mind, intellect), a derivative from the verb-stem *-ni-kon-ton*, "to think," which itself seems to be a reflexive form of the verb *-kon*, "to see," with "the pluralitative suffix *ton*, denotive of the multiplicity of the act or thing affected by it;" (3) *oñ-non'-kwă't*, which now signifies "medicine," but is in archaic use